VMWARE VSPHERE: OPTIMIZE AND SCALE [V7]

Course Code: 100766

Learn advanced skills for configuring and maintaining a highly available and scalable virtual infrastructure.

This five-day course teaches you advanced skills for configuring and maintaining a highly available and scalable virtual infrastructure. Through a mix of lecture and hands-on labs, you configure and optimize the VMware vSphere 7 features that build a foundation for a truly scalable infrastructure, and you discuss when and where these features have the greatest effect.

Attend this course to deepen your understanding of vSphere and learn how its advanced features and controls can benefit your organization.

What You'll Learn

- Configure and manage vSphere networking and storage for a large and sophisticated enterprise
- Use VMware vSphere Client to manage certificates
- Use Identity Federation to configure VMware vCenter Server to use Microsoft ADFS
- Use VMware vSphere Trust Authority to secure the infrastructure for encrypted VMs
- Use host profiles to manage VMware ESXi host compliance
- Create and manage a content library for deploying virtual machines
- Manage VM resource usage with resource pools
- Monitor and analyze key performance indicators for compute, storage, and networking resources for ESXi
  hosts
- Optimize the performance of ESXi and VMware vCenter Server
- Discuss the purpose and capabilities of VMware vSphere with Kubernetes and how it fits into the VMware
  Tanzu portfolio

Who Needs to Attend

Experienced system administrators, system engineers, and system integrators.

Prerequisites

Equivalent knowledge and administration experience with ESXi and vCenter Server.

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VIRTUAL CLASSROOM LIVE	$6,015 CAD	5 Day

Virtual Classroom Live Outline

Course Introduction

- Introductions and course logistics
- Course objectives

Network Scalability

- Configure and manage vSphere distributed switches
- Describe how VMware vSphere Network I/O Control enhances performance
- Explain distributed switch features such as port mirroring and NetFlow

Storage Scalability

- Explain why VMware vSphere VMFS is a high-performance, scalable file system
- Explain VMware vSphere Storage APIs - Array Integration, VMware vSphere API for Storage
  Awareness, and vSphere APIs for I/O Filtering
- Configure and assign virtual machine storage policies
- Create VMware vSAN storage policies
- Configure VMware vSphere Storage DRS and VMware vSphere Storage I/O Control
- Discuss vSphere support for NVMe and iSER

Host and Management Scalability

- Use the vSphere Client to manage vSphere certificates
- Describe identity federation and recognize its use cases
- Configure identity federation
- Describe the benefits and use cases of vSphere Trust Authority
- Configure vSphere Trust Authority
- Use host profiles to manage ESXi configuration compliance
- Manage and update VM templates in content libraries

- Create and manage resource pools in a cluster

CPU Optimization

- Explain the CPU scheduler operation and other features that affect CPU performance
- Explain NUMA and vNUMA support
- Use esxtop to monitor key CPU performance metrics

Memory Optimization

- Explain ballooning, memory compression, and host-swapping techniques for memory reclamation when
  memory is overcommitted
- Use esxtop to monitor key memory performance metrics

Storage Optimization

- Describe storage queue types and other factors that affect storage performance
- Use esxtop to monitor key storage performance metrics

Network Optimization

- Explain performance features of network adapters
- Explain the performance features of vSphere networking
- Use esxtop to monitor key network performance metrics

vCenter Server Performance Optimization

- Describe the factors that influence vCenter Server performance
- Use VMware vCenter Server Appliance tools to monitor resource use

Introduction to vSphere with Kubernetes

- Differentiate between containers and virtual machines
- Identify the parts of a container system
- Recognize the basic architecture of Kubernetes
- Describe a basic Kubernetes workflow
- Describe the purpose of vSphere with Kubernetes and how it fits into the VMware Tanzu portfolio
- Explain the vSphere with Kubernetes supervisor cluster
- Describe the Tanzu Kubernetes Grid service

Jun 16 - 20, 2025 | 10:00 AM - 6:00 PM EDT

Jul 21 - 25, 2025 | 10:00 AM - 6:00 PM EDT

Aug 18 - 22, 2025 | 10:00 AM - 6:00 PM EST

Sep 22 - 26, 2025 | 10:00 AM - 6:00 PM EST

Oct 20 - 24, 2025 | 10:00 AM - 6:00 PM EST

Nov 17 - 21, 2025 | 10:00 AM - 6:00 PM EST

Dec 15 - 19, 2025 | 10:00 AM - 6:00 PM EST

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